Global Database

- Topic: Current status and future directions

- Goal: Advance the state of technology and science of aquatic remote sensing

- Speakers
  - Philipp Saile, UN/Federal Institute of Hydrology, Germany, **GEMStat**
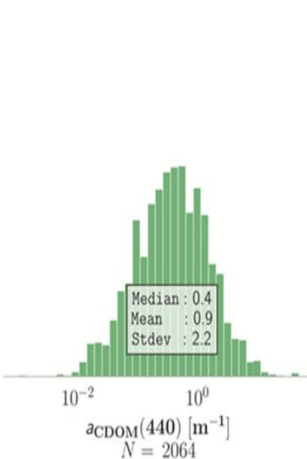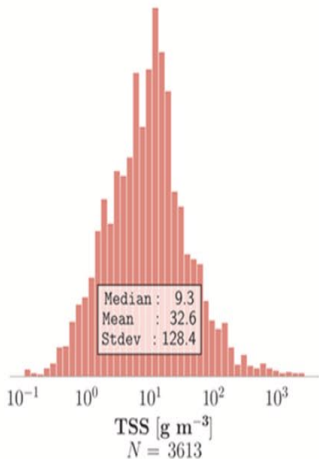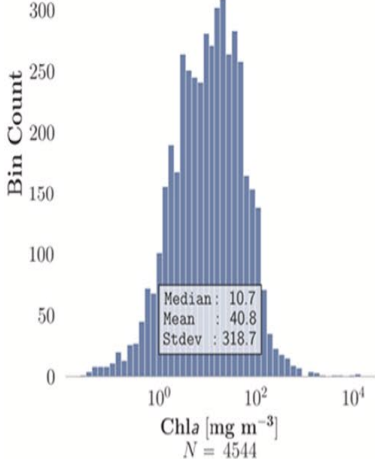 - Adam Varley, *University of Stirling,* **LIMNADES**
  - Violeta S. Calzado, NASA GSFC Ocean Ecology Lab / UMBC, **NOMAD/SeaBASS**
  - Daniela Gurlin, Wisconsin Department of Natural Resources, **GLORIA**

A community-wide data sharing effort → Collaboration on multiple publications & GLORIA

- Source: Field campaign data with co-located

GLORIA
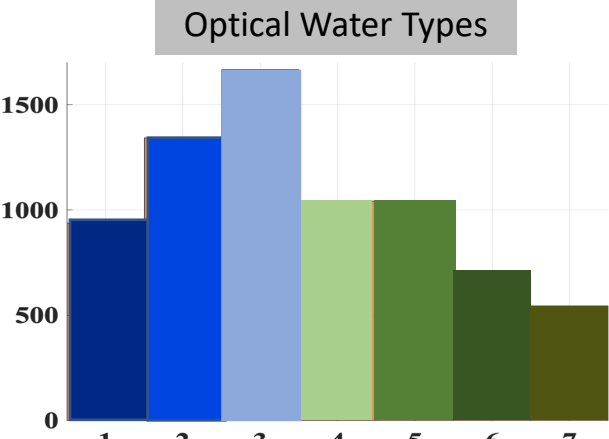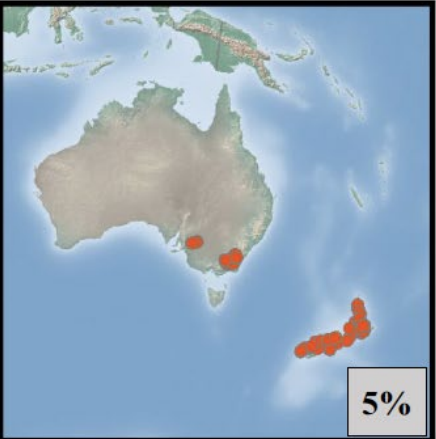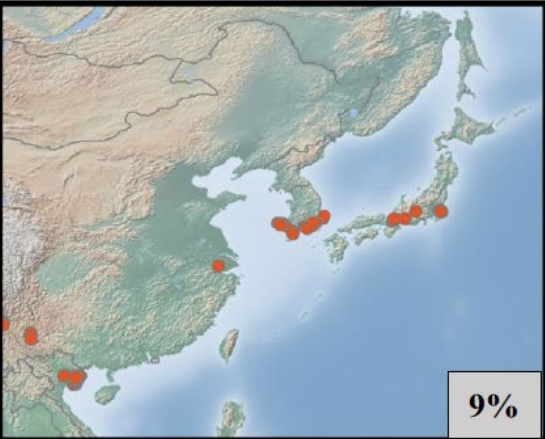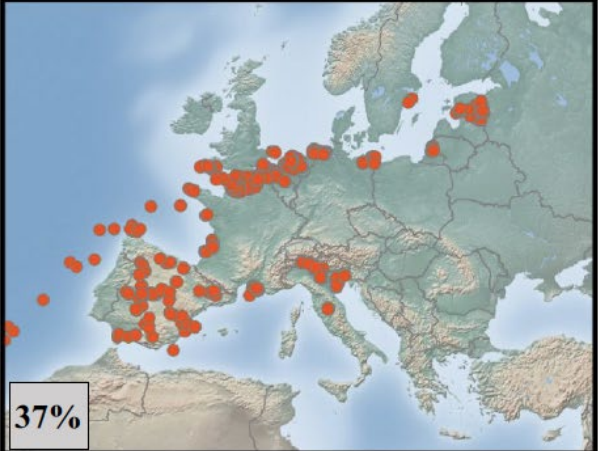
Validation Data (N ~ 8000)   → **100K in 3 years**

- **Chl$a$:** USGS Water Quality Portal, USGS National Water Information System, NOAA World Ocean Data (N ~ 8000)

- **TSS:** USGS Water Quality Portal, USGS National Water Information System (N ~ 1000)

- **a_{cdom}(440):** Environment and Climate Change Canada, Lake Pulse Network, University of Minnesota (N ~ 250)
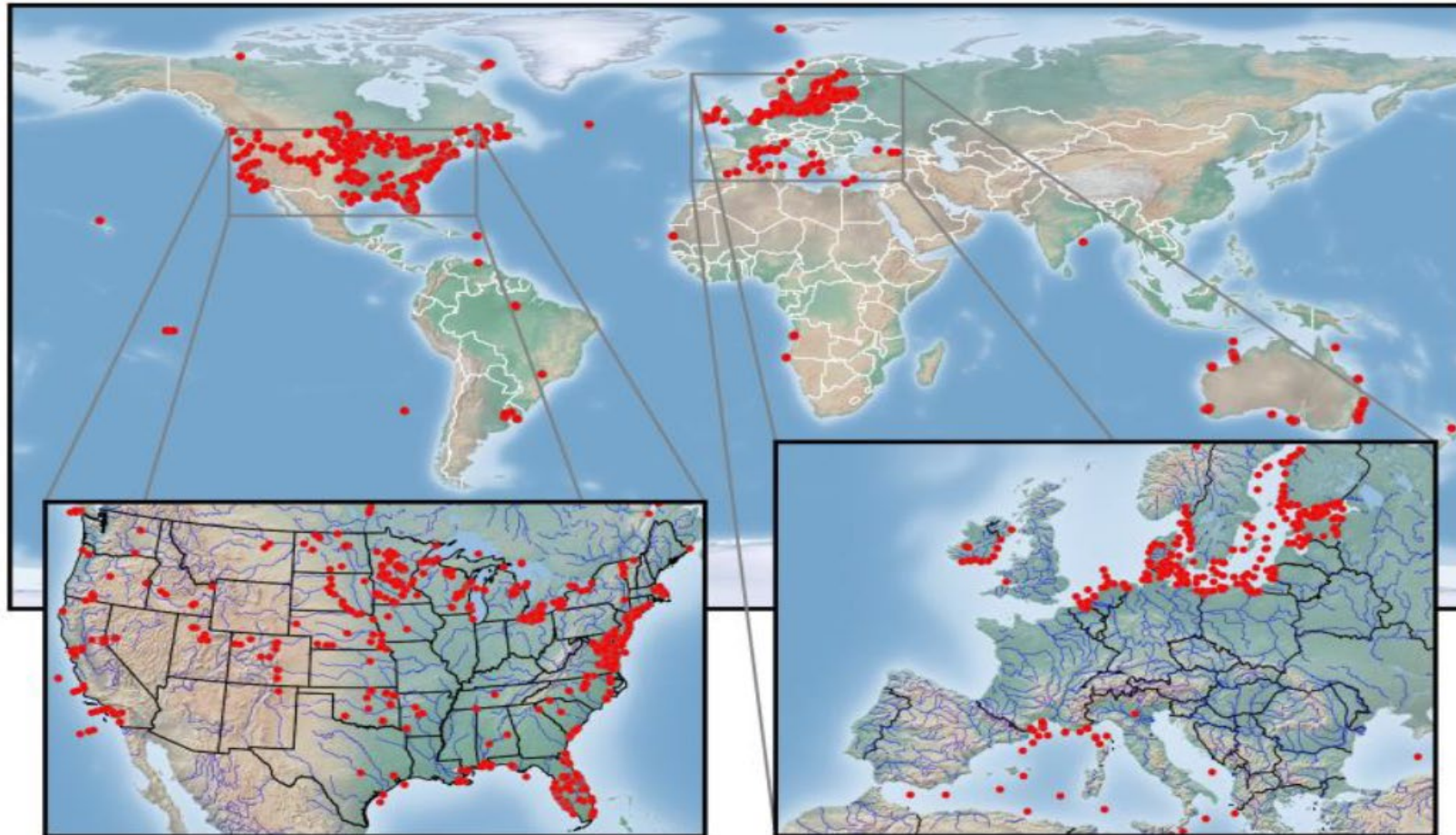
Breakout III: Global Databases

1. **Metadata standardization**

   - How can we achieve this? Should we produce a metadata template?

2. **Accessibility and useability**

   - Are data within NOMAD/SeaBASS, LIMNADES, and GEMStat readily accessible? (e.g., downloadable CSV files?)
   - Can datasets be readily co-aligned (Rrs + Chla + IOPs +…)?
   - Can I constrain my search to a specific radiometer/manufacturer or radiometric method?

3. **Development/Analysis ready database**

   - What does it take to build one global validation database with which a user can obtain several parameters?
   - How can we build a coalition to construct this dataset? Would a GLORIA model work?
   - Can we pull all the data from USGS NWIS, WQP, NOAA WOD, GLEON,….?
   - Name potential existing databases that we are not aware of.

4. **Empowering non-expert users to validate standard satellite products**

   - How can we allow users to upload their in situ data and create scatterplots/statistics?

5. **Going beyond Chla**

   - Should we assemble non-optical proxies (nutrients, phytoplankton data, particle properties, DOC, DO,…)?